

Remarks

Applicants acknowledge and appreciate that claims 11-13 have been allowed, and thank the Examiner for due consideration of these claims.

Applicants further acknowledge and appreciate that claims 15-18 have been deemed allowable if rewritten in independent form, incorporating elements from rejected base claims, and again thank the Examiner for due consideration of these claims.

Reconsideration of the remaining claims in the Application, as well as reconsideration of claims 15-18 in their present (i.e., dependent) form, is respectfully requested.

Upon entry of the foregoing amendment, claims 1 and 14-32 are pending in the application, with claim 1, 11, 12, and 27 being the independent claims. Claims 1 and 17 are currently amended. Claims 27-32 are new. These changes introduce no new matter, and their entry is respectfully requested.

Based on the above amendments and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

35 U.S.C. § 112 Issues Raised Under "Response To Arguments"

The Office Action alleges (page 2) that in the Applicants' previous reply (filed May 23, 2007), aspects of the Applicants' arguments regarding a rejection under 35 U.S.C. § 103(a) were improper due to improper invocation of 35 U.S.C. § 112 sixth paragraph issues.

Applicants respectfully submit that the Examiner's assessment of the Applicants' arguments as improper is not consistent with Applicants' understanding of 35 U.S.C. § 112, paragraph six. Applicants' further respectfully submit that the previously submitted arguments were valid as stated. As the Office Action did not actually base a rejection or objection on the Examiner's assessment with respect to 35 U.S.C. § 112 sixth paragraph, Applicants believe any detailed reply in support of previous arguments would be moot at this time.

Rejections under 35 U.S.C. § 102(b)

Claims 1, 14, and 19-26 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent 6,337,682 to Hwang (hereinafter "Hwang"). Applicants respectfully traverse.

Page 4 of the Office Action recites text from claim 1 of the present application, specifically:

“wherein the reestablishment of the synchronization between the video clock signal and the master sync signal occurs over a convergence time, wherein the duration of the convergence time is programmable”

The Office Action then alleges that this claim element is anticipated by Hwang:

“(by adjusting the frequency divisional value, the frequency of the sampling clock signal CLK1 is adjusted).”

Hwang may disclose establishing a synchronization between a first video signal and a second video signal. However, the cited text from claim 1 of the present application (“wherein the reestablishment of the synchronization between the video clock signal and the master sync signal occurs over a convergence time, wherein the duration of the convergence time is programmable”) is an element specifically not disclosed by Hwang. The lack of disclosure by Hwang is discussed further below.

Support for the cited element of claim 1 may be found throughout the present application, including for example:

“An advantage of the present invention is that the convergence time (i.e., how quickly the slave pulse stream can be synchronized to the master pulse stream) can be programmably adjusted via rate controller circuit 314. That is, the amount of time (i.e., in pixel pulses) added to (or removed from) the slave pulse stream during each iteration of the loop will determine how quickly the loop converges and achieves synchronization.” (paragraph 0047 of the published application)

“Another aspect of the invention is the phase-locked loop circuit having a digital rate controller. The digital rate controller feature allows the phase-locked loop to be programmable so that its speed can be adjusted to react more quickly or more slowly to changes.” (paragraph 0017 of the published application)

Further support may be found, *inter alia*, in paragraphs 0034 through 0039 of the published application.

Applicants submit that the cited text of claim 1 is sufficient to claim this element of the present system and method, which is not anticipated by the Hwang reference (as discussed further below). However, in the interest of advancing prosecution of the present application, Applicants have amended claim 1 to further recite: "... said duration of the convergence time beginning at the start of convergence and ending at the achievement of convergence."

Structural elements of the present invention which enable the claimed functionality, as well as the interactions among those structural elements, are taught throughout the present application and recited in dependent claims.

In summary, the present system and method is configured so that, with respect to the video clock signal and the master sync signal, "... the synchronization [of the two signals] ... occurs over a convergence time, *wherein the duration of the convergence time is programmable ...*", that is, the time from the "start of *convergence* and ending at the achievement of convergence" *is programmable*.

Applicants submit that the additional language recited in currently amended claim 1 ("... said duration of the convergence time beginning at the start of convergence and ending at the achievement of convergence") does not add any additional limitation(s) with respect to the claims as previously submitted. Rather, the additional claim language serves to clarify elements already recited in previously submitted claims. Applicants further submit that the claim language, as previously submitted, was clear, unambiguous, and patentable over the cited reference. However, in light of the Examiner's rejections, and with the goal of advancing prosecution of the application, Applicants have elected to remove any perceived lack of clarity by amending the claims with the additionally recited text.

The plain meaning of the claim language is that the synchronization process begins at a first point in time with the two clock signals not synchronized, and concludes at a second point in time with the two clock signals synchronized. The time interval between the first point in time and the second point in time is the duration of the convergence time. That duration of the convergence time is programmable according to the present system and method.

On page 4, the Office Action alleges that these recited claim elements of the present system and method are anticipated by Hwang in that "... (by adjusting the frequency divisional value, the frequency of the sampling clock signal CLK1 is adjusted)."

Hwang may disclose that by adjusting a frequency divisional value, the frequency of the sample clock signal CLK1 is adjusted. This may be disclosed in Hwang at, for example, column 5, lines 24-29, and column 6, lines 30-34. Adjusting the frequency divisional value is one element of a method by which Hwang may synchronize the sample clock signal CLK1 with another clock signal (such as a synchronous signal). However, nowhere does Hwang disclose programming or otherwise controlling the *duration* in time over which the synchronization takes place. That is, while Hwang may disclose synchronization, he does not disclose or suggest a *programmable rate* of synchronization.

For example, Applicants respectfully refer the Examiner to column 6, line 27, through column 7, line 5, which refer in large measure to the method disclosed in FIG. 6 of Hwang. The disclosed method describes a synchronization of a first synchronous signal and a second synchronous signal, but there is no disclosure pertaining to a rate, speed, or duration of time for the synchronization process.

There is further no disclosure throughout Hwang of a method or mechanism for programming a rate, speed, or duration in time for a synchronization process. There is further no disclosure throughout Hwang of any system element directed to controlling a rate, speed, duration, or length in time over which a first clock signal is synchronized to a second clock signal.

Applicants respectfully submit that the Hwang reference does not disclose each and every element in Applicants' claim 1. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (MPEP § 2131). Accordingly, for at least the aforementioned reasons, reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(b) is respectfully requested.

Claims 14 and 19-26 depend upon claim 1. Because each dependent claim incorporates all of the elements of the independent claim from which it depends, as well

as additional features, the above arguments made with respect to claim 1 apply a fortiori to claims 14 and 19-26. Claims 14 and 19-26 are therefore allowable over Hwang for at least the same reasons as independent claim 1 and further in view of their own respective features.

All of the stated grounds of rejection or objection for independent claim 1 and dependent claims 14 and 19-26 under 35 U.S.C. § 102(b) have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw the rejection of claims 1, 14 and 19-26, and move the claims to allowance.

Objections to Claims 15-18

The Examiner has stated that claims 15-18 are objected to as being dependent upon a rejected base claim (e.g., claim 15 depends on claim 14, which in turn depends on claim 1), but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants respectfully traverse the objection to claims 15-18 in their present form as dependent claims. As discussed above, claim 1 and claim 14 are both patentable over Hwang. Therefore, and as also discussed above, claims 15-18 which depend from claim 1 by way of claim 14 are also patentable over Hwang for at least the same reasons as claim 1 and claim 14, as well as in view of their own respective features (as already acknowledged in the Office Action). Applicants therefore respectfully request that the Examiner reconsider and withdraw the objections to claims 15-18 in their present form as dependent claims.

New Claims 27-32

New claims 27-32 recite numerous elements which are substantially analogous to claim 1 (for claim 27) and claims 14-18 (for claims 28-32). However, new claim 27 recites, in part:

"... wherein the reestablishment of the synchronization between the video clock signal and the master sync signal occurs over a programmable convergence time,

such that a speed of the convergence of the video clock signal and the master sync signal is thereby programmably adjustable."

Similarly, new claim 28 recites in part:

"... wherein the programmable digital rate controller further controls a lock responsiveness rate at which the phase-locked loop circuit reestablishes the synchronization between the video clock signal and the master sync signal, wherein:

a faster lock responsiveness rate results in a faster speed of the convergence;

and a slower lock responsiveness rate results in a lower speed of the convergence."

New claims 27-32 are patentable over the Hwang reference for substantially the same reasons as those discussed above with respect to claims 1, 14, and 19-26.

In particular, a "speed of the convergence" has support in the present application, *inter alia*, in paragraphs 0017, 0047, and 0034 through 0039 of the published application.

Nowhere does the Hwang reference disclose programming or otherwise controlling either a duration in time over which the synchronization takes place or a speed at which synchronization takes place.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn, and further that claims 1 and 14-32 be moved to allowance.

Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Edward W. Yee
Attorney for Applicants
Registration No. 47,294

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1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

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